Artistry in Sound

ONKYO®

TA-RW909

Stereo Cassette Tape Deck

Instruction Manual

• Congratulations on your purchase of the ONKYO TA-RW909 Cassette Tape Deck. • Please read this manual thoroughly before making connections and turning power on. • Follow these instructions to obtain optimum performance and maximum listening enjoyment from your new TA-RW909. • Please retain this manual for future reference.

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Features

- **Simultaneous Dual Recording and Quick Double Auto Reverse**
  Two dual-cassette decks provide playback *and recording* capabilities in both A and B transports. Plus high-speed dubbing from A to B, or recording of two tapes at the same time from the same source. Extended continuous recording and playback using both decks is also possible. And Onkyo's Quick Auto Reverse virtually eliminates a break in the music during tape-direction change.
- **Remote-Operated Power Glide Loading**
  Whether you open the Power Glide Loading trays with the supplied remote control or the front panel feathertouch keys, you'll appreciate the unusually swift and quiet reaction the separate tray motors provide, not to mention the unprecedented, striking design.
- **Deck A and B Random Play**
  Another Onkyo original – random play from a cassette deck. While Deck A is playing a song, Deck B randomly selects the next number and begins playing immediately – without a break in the music – when the song on Deck A ends, and vice versa.
- **Dual Real Time Counters (4-Digit)**
  Each deck has its own real time counter, making it easy to locate specific sections and perform other editing operations. Both timers can display the elapsed time or remaining time.
- **12-Segment Independent L/R Channel Fluorescent Peak Hold Meters • Skip Function • Blank Skip**
- **Separate Input & Balance Manual Controls • Accubias • Timer Rec/Play • CD Synchro Recording**
- **R1 Compatible Remote Control Included**

"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

• For models having a power cord with a polarized plug.

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

• Sur les modèles don't la fiche est polarisée.

ATTENTION:

POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQ'AU FOND.

"CAUTION"

"TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL."

• The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

• The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important safeguards

1. Read Instructions — All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions — The safety and operating instructions should be retained for future reference.
3. Heed Warnings — All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions — All operating and use instructions should be followed.
5. Water and Moisture — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands — The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PORTABLE CART WARNING

S315A

7. Wall or Ceiling Mounting — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat — The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Polarization — If the appliace is provided with a polarized plug having one blade wider than the other, please read the following information; The polarization of the plug is a safety feature. The polarized plug will only fit the outlet one way. If the plug does not fit fully into the outlet, try reversing it. If there is still trouble, the user should seek the services of a qualified electrician. Under no circumstances should the user attempt to defeat the polarization of the plug.
12. Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Cleaning — The appliance should be cleaned only as recommended by the manufacturer.
14. Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. Damage Requiring Service — The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped or the enclosure damaged.
17. Servicing — The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

ATTENTION FOR BRITISH MODEL:

- Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.
- IMPORTANT: The wires in the mains lead are colored in accordance with the following code:
  Blue: Neutral
  Brown: Live

As the colors of the wires in the mains lead of this unit may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:
The wire which is colored blue must be connected to the terminal which is marked with the letter N or colored black.
The wire which is colored brown must be connected to the terminal which is marked with the letter L or colored red.

This apparatus complies with requirements of EC directive 87/308/EEC

Precautions

1. Warranty card

The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.

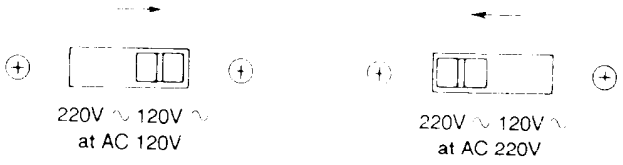
2. Power

WARNING
BEFORE CONNECTING THE UNIT TO AN AC OUTLET, READ THE FOLLOWING SECTION CAREFULLY.

- Some models are designed for use only with the power supply voltage of the region where they are sold.
  - U.K. and Australian models: AC 240V, 50Hz
  - U.S.A. and Canadian models: AC 120V, 60Hz
  - Worldwide models: AC 120 and 220V switchable, 50/60Hz

• Voltage selector (rear panel)

Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the power supply in your area before plugging in the unit. Voltage is changed by sliding the groove in the switch with a screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before plugging in the unit. Models without a voltage selector can only be used in areas where the power supply voltage is the same as that of the unit.



WORLDWIDE MODELS ONLY

3. Deck location

- Do not use or leave in direct sunlight or in other places subject to high temperature and humidity. The unit should also not be left in potentially hot places such as near heating appliances. Excessive heat and moisture can lead to internal damage and serious malfunctions (this also applies to cassette tapes). The recommended ambient temperature range is 5°C to 35°C.
- Avoid damp and dusty places and locations prone to vibrations.
- Be extremely careful with the recording/playback heads. Clean and demagnetize them regularly but under no circumstances should magnets or other metals be used anywhere near the heads.
- This unit is extremely sensitive to magnetic fields, so do not use near large speakers or other devices which generate magnetic fields.

- Hum may even be induced by magnetic flux leakage from the power transformer in certain amplifiers. Therefore, this unit should also be kept clear of the amplifier.
- Do not remove the cabinet case. If any of the internal parts are handled, there is a considerable danger of electric shock.

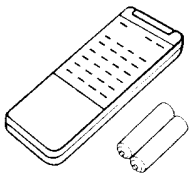
4. Cassettes to avoid:

- Cassettes with poorly formed cases that rattle during rewind and fast forward.
- Low cost cassettes with no guide roller or pressure pad spring should never be used for stereo.
- C-120 cassettes—because the tape and the coating are extremely thin, distortion levels are high. Also, even a slight stretching of the tape will make it susceptible to being caught up in the pinch roller and capstan.
- Endless tapes, if used for a long period of time, can overheat.

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang and Olufsen. "Dolby," the double-D symbol and "HX Pro" are trademarks of Dolby Laboratories Licensing Corporation.
- Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

Supplied Accessories

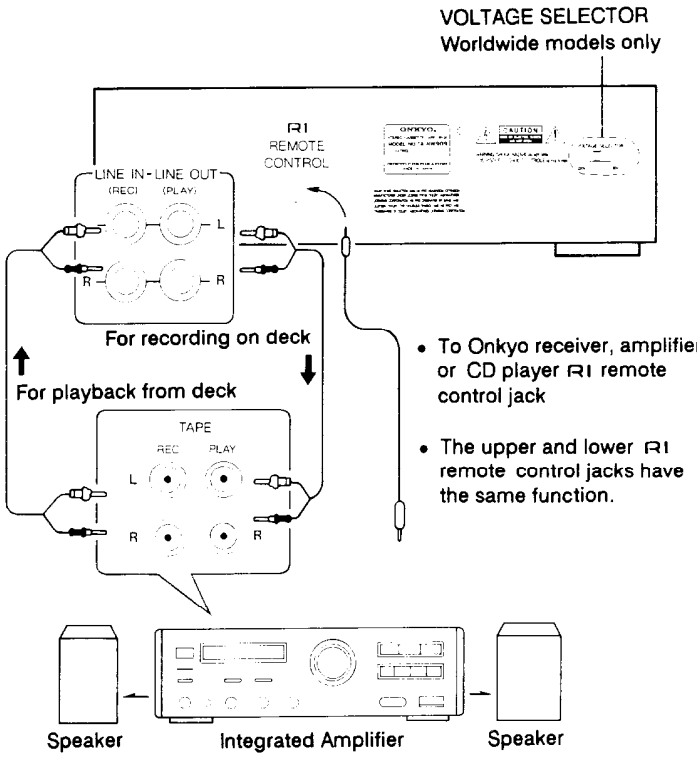
Connecting cable x 2



Remote control transmitter battery x 2

System connections

All connections should be made with the power OFF. Hook up to the amplifier:



Connections with an amplifier

Connect the tape deck LINE IN jacks to the TAPE REC jacks on the rear panel of the amplifier and the tape deck LINE OUT jacks to the amplifier TAPE PLAY jacks.

Remote control jack

For remote control operation, connect this jack and any Onkyo amplifier, receiver or CD player bearing the RI mark using the remote control cable. (Record/pause, stop, play, fast-forward and rewind operations can be accomplished using the remote control of the master unit.) See the instruction manual of your amplifier, receiver or CD player for details.

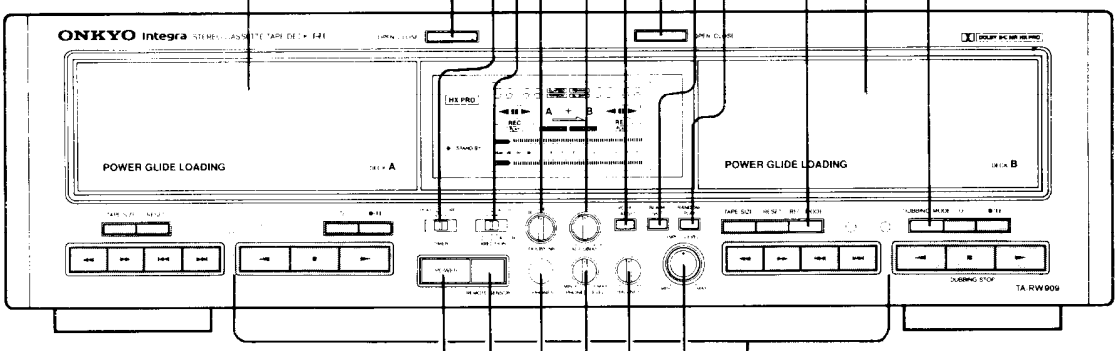
Note:

Do not attempt to connect the RI remote control jack to any equipment other than an Onkyo component bearing the RI mark. Doing so could cause the unit to malfunction.

Control positions and names

Front Panel

For more information about a button or control, turn to the page number listed in square brackets [ ].



Accubias Control Knob (ACCUBIAS -/+) [12]

Dolby NR Switch (DOLBY NR B/OFF/C) [9]

Direction Switch
(DIRECTION ⇄ / ⊃ /A→B / ⇄ / ⊃ /A ⊂ B) [13]

Timer Switch (TIMER PLAY/OFF/REC)[12]

Deck A Cassette Door Open/Close Button (OPEN/CLOSE) [6]

Deck A Cassette Door

Deck A/B Counter Mode Button(REMA/ELAPSED) [11]

Deck B Cassette Door Open/Close Button (OPEN/CLOSE)

Blank Skip Button (BLANK SKIP) [7]

Random Play Button (RANDOM PLAY) [7]

Recording Mode Button (REC MODE)[8]

Deck B Cassette Door

Dubbing Mode Button (DUBBING MODE) [10]

Power Button (POWER)

Note: Standby indicator lights when power is off.

Remote Sensor (REMOTE SENSOR) [5]

Headphone Jack (PHONES)

Dynamic type headphones with a rated impedance in the 8 to 200 ohm range are recommended.
Adjust headphone volume using the PHONES LEVEL knob.

Headphone Level Control Knob (PHONES LEVEL MIN/MAX)

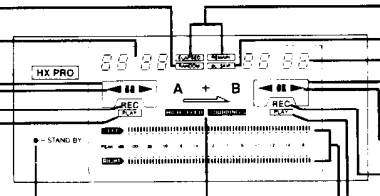
Input Balance control Knob [9] (BALANCE L/R)

Input Level Control Knob (INPUT LEVEL MIN/MAX) [9]

Operation Buttons (DECK-A, DECK-B)

TAPE SIZE	: Tape Size Selector Button [11]
RESET	: Elapsed Time Reset Button [8,9,11]
O	: Auto Space Button [10]
●/II	: Rec/Pause Button [8, 9, 10]
◄◄	: Rewind Button [6]
►►	: Fast Forward Button [6]
I◄◄	: Forward Skip Button [7]
►►I	: Reverse Skip Button [7]
◄	: Reverse Play Button [6, 8, 9, 10]
■ (DUBBING STOP)	: Stop Button (Dubbing Stop) [6, 8, 9, 10]
►	: Forward Play Button [6, 8, 9, 10]

Display



Random Play Indicator

Deck A Real Time Counter/ Tape Size Indicator

Deck A Cassette In Indicator

Deck A Direction and Rec/Pause Indicator

Deck A Recording Indicator

Deck A Play Indicator

Standby Indicator

Counter Mode Indicator

Blank Skip Indicator

Deck B Real Time Counter/Tape Size Indicator

Deck B Cassette In Indicator

Deck B Direction and Rec/Pause Indicator

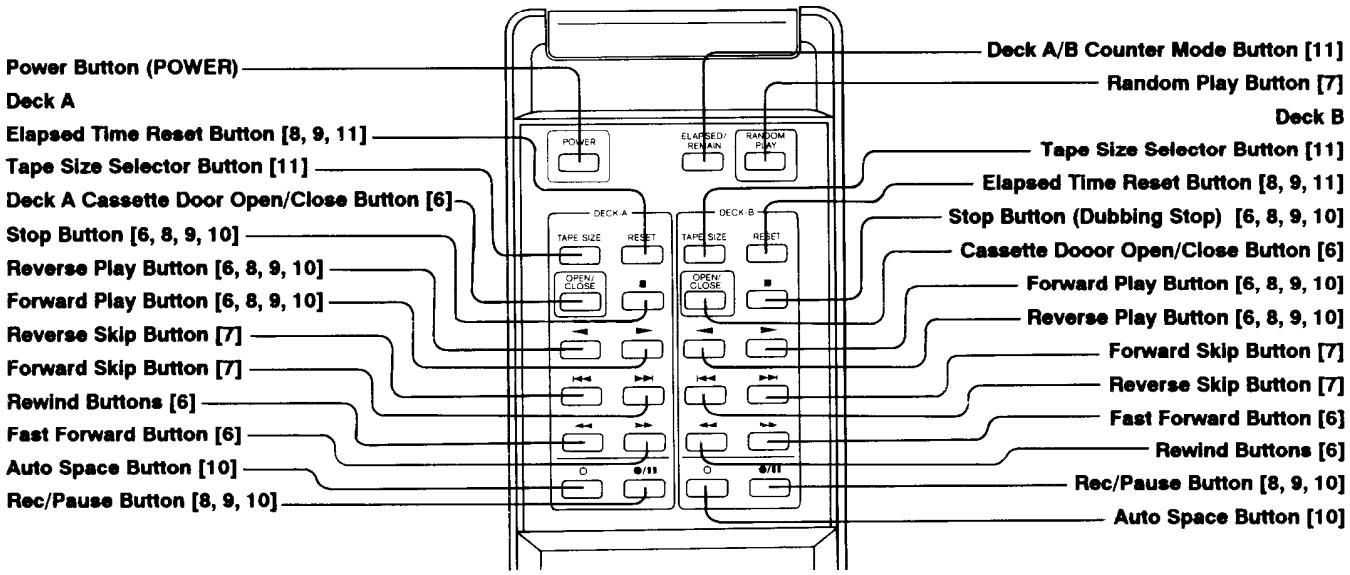
Deck B Recording Indicator

Deck B Play Indicator

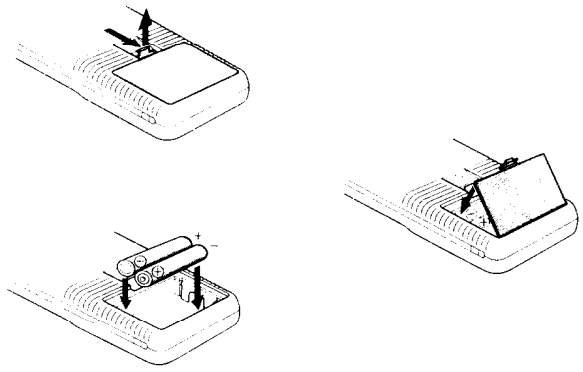
Peak Level Indicators

Dubbing Mode Indicators

Remote Control Trasnsmitter


Power Button (POWER)
Deck A
Elapsed Time Reset Button [8, 9, 11]
Tape Size Selector Button [11]
Deck A Cassette Door Open/Close Button [6]
Stop Button [6, 8, 9, 10]
Reverse Play Button [6, 8, 9, 10]
Forward Play Button [6, 8, 9, 10]
Reverse Skip Button [7]
Forward Skip Button [7]
Rewind Buttons [6]
Fast Forward Button [6]
Auto Space Button [10]
Rec/Pause Button [8, 9, 10]
Deck A/B Counter Mode Button [11]
Random Play Button [7]
Deck B
Tape Size Selector Button [11]
Elapsed Time Reset Button [8, 9, 11]
Stop Button (Dubbing Stop) [6, 8, 9, 10]
Cassette Dooor Open/Close Button [6]
Forward Play Button [6, 8, 9, 10]
Reverse Play Button [6, 8, 9, 10]
Forward Skip Button [7]
Reverse Skip Button [7]
Fast Forward Button [6]
Rewind Buttons [6]
Rec/Pause Button [8, 9, 10]
Auto Space Button [10]
POWER
ELAPSED/ REMAIN
RANDOM PLAY
DECK A
DECK B
TAPE SIZE
RESET
OPEN/ CLOSE

Transmitter Battery Replacement



Batteries

1. The remote control transmitter is powered by two batteries. Before using this unit for the first time, insert the batteries (included) as shown in the diagram.
2. Average battery life is about one year. It may be shorter depending on the frequency of use and environment (temperature and humidity) in which the remote control transmitter is used.
3. If the remote control transmitter does not operate even though front panel controls function normally, the batteries should be replaced. Use only batteries listed in the following chart.

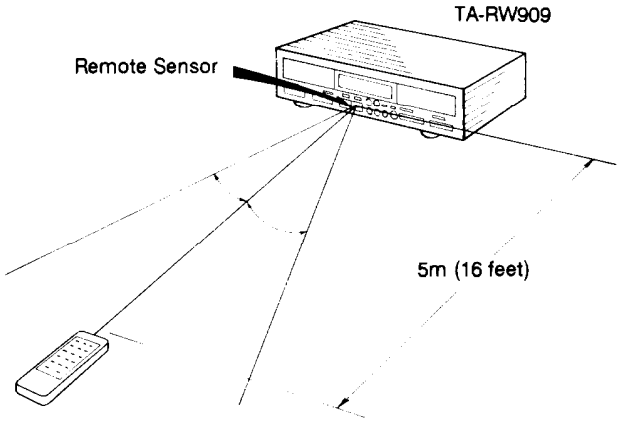
Type	Voltage	Size
Manganese	1.5V	AAA R03 UM-4

Notes:

1) Do not leave an expired battery in the case as it may leak or damage the battery case.
2) When inserting the batteries, be sure the (+) and (−) ends are properly aligned.
3) Do not use nickel-cadmium (rechargeable) batteries.
4) Do not use one specified (manganese) battery and one alkaline battery at the same time.
5) Replace both batteries at once; do not use one old and one new battery together.

Precautions

1. Remove the batteries if the remote control transmitter is not going to be used for a long time.
2. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of the TA-RW909 is exposed to bright light. To prevent this from occurring, place the TA-RW909 so that it is not directly exposed to bright light.
3. The batteries of the remote control transmitter must be replaced periodically.
4. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must be pointed at the reception window when a command is sent to the tape deck.
5. If the TA-RW909 is placed inside an audio rack behind a glass door, the door should not have colored glass or have any decorations on it, since this could shorten the range or prevent commands from being received.
6. Use of other infrared remote control devices in the same room may cause interference.
7. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your Onkyo Service Center.



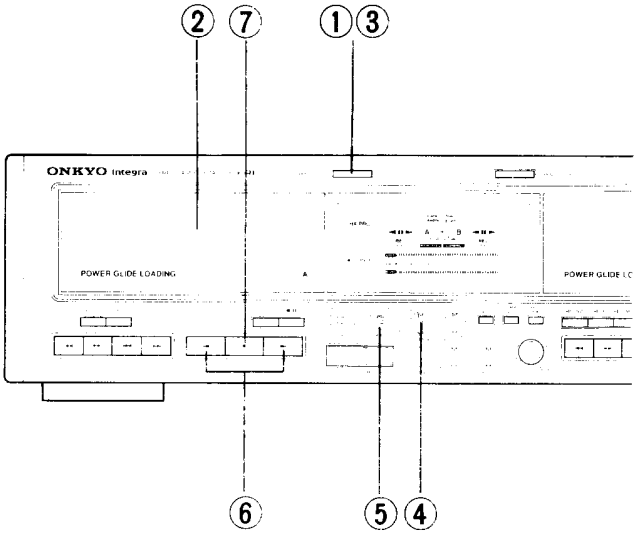
Remote Control Transmitter
RC-232K

Common modes of operation — playback

Check once again that all connections have been completed exactly as indicated in the connections diagram and plug in the AC cord. After plugging in the unit, no operations are possible until the ❚❚ Pause indicator has stopped flashing on and off and the STAND-BY indicator is on. This deck holds two cassettes at once. Both Deck A and Deck B are capable of quick auto-reverse playback and recording.

Tape Playback

Tapes can be played back using either Deck A or Deck B. Deck A is pictured. The layout for Deck B is similar.



① Depress the OPEN/CLOSE button on the left to open the Deck A cassette door and the one on the right to open the Deck B cassette door.
② Insert cassettes with the exposed tape facing down and the side to be played facing outward.
③ Press the OPEN/CLOSE button or press gently on the cassette. The cassette door closes and the cassette is locked in position.
④ Set the DOLBY NR switch to the proper position for the tape to be used. Tapes recorded using Dolby B or C NR should be played back with the DOLBY NR switch in the B or C position, as appropriate. Tapes recorded without Dolby NR should be played back with the DOLBY NR switch in the OFF position. Refer to "The Dolby Noise Reduction Systems" on page 9 for details.
⑤ Set the DIRECTION switch to the desired tape transport mode. See the "Direction switch" section on page 13 for details.
⑥ Press the ► or ◄ play button depending on which side of the cassette you wish to listen to. The [PLAY] indicator will light. The Peak Level indicators will light during playback showing the strength of the recorded signal.
⑦ The auto-stop mechanism will automatically stop tape transport (depending on the tape transport mode) if a tape is played through to the end. To stop playback at any other time, press the ■ button. After tape transport has stopped and the Peak Level indicators have gone out, press the OPEN/CLOSE button to open the cassette door and remove the cassette.

- If the ►, ◄, ►►, ◄◄, ►►I or I◄◄ button is pressed when the cassette door is open, the door closes automatically and the cassette is locked in position. Then the operation corresponding to the button pressed takes place.

Auto Play

The TA-RW909 is equipped with an Auto Play function. When a cassette with the erasure prevention tabs broken off (refer to page 14, "Handling cassette tapes" for details) or a commercially produced pre-recorded tape is loaded, the play indicator flashes on and off and then play begins automatically. This capability is called the Auto Play function.

Notes:

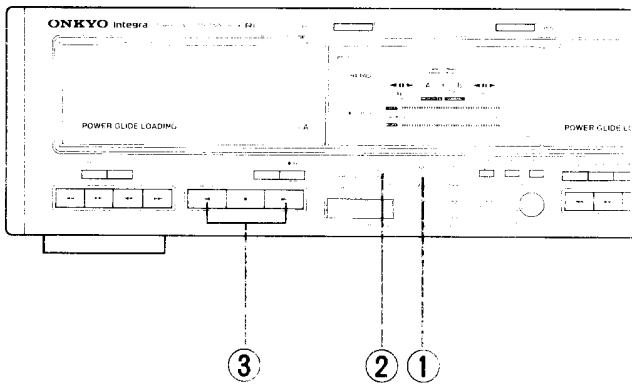
1) Auto Play does not operate when a cassette with the erasure prevention tabs intact is loaded
2) Auto Play starts cassette play in the forward direction ►. If you wish to hear a specific selection, make sure the tape is wound to the appropriate place before loading it.
3) If the cassette door is left open for more than approximately five minutes, it closes automatically. In this case the Auto Play function does not operate.

Fast Forward and Rewind

Press the ►► button to wind the tape rapidly from left to right and the ◄◄ button to wind it from right to left. The tape will stop when the ■ button is pressed or when the end of the tape is reached (due to the auto-stop mechanism).

Continuous Tape Playback

Insert the cassettes you wish to play in the Deck A and Deck B cassette doors. Set the DIRECTION switch to the (A ⊂⊃ B) position. Press the ► or ◄ play button of either Deck A or Deck B. Both sides of both cassettes will be played back, one after the other, and then the process is repeated. After four complete playback cycles tape transport stops automatically.



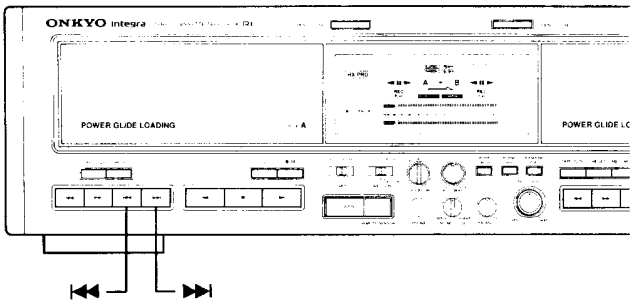
① Set the DOLBY NR switch to the proper position for the tapes about to be used.
- Since the DOLBY NR switch affects both Deck A and Deck B, both cassettes used for continuous playback should have been recorded using the same type of Dolby NR (B or C) or none at all. If the two cassettes were recorded using different types (e.g. one Dolby B and the other Dolby C), you will have to change the DOLBY NR switch setting each time tape play switches from one tape to the other in order to obtain optimum sound quality.

② Set the DIRECTION switch to the (A ⊂⊃ B) position.
- If you use the (⊃) position, both sides of both cassettes will be played only once.

③ Press the ► or ◄ play button of Deck A or Deck B depending on the point from which you wish to initiate continuous playback.

Using the Skip Function

This function allows you to skip up to nine selections in the forward direction mode or eight selections (nine including the current selection) in the reverse direction mode.



To use the skip function when the forward direction is ►, press the ▶▶| button. To use it in the reverse direction press the |◀◀ button.

Skip operation begins as soon as the ▶▶| (or |◀◀) button is pressed. When the ▶▶| button is pressed, the display indicates the number of selections to be skipped in the forward direction (P:1, P:2 ... P:9). The number of selections corresponds to the number of times the ▶▶| button is pressed. In like manner, when the |◀◀ button is pressed the display indicates the number of selections to be skipped in the reverse direction (P:-1, P:-2 ... P:-9). When the target selection is reached, normal play resumes.

To reduce the number of selections to be skipped, press the Skip button corresponding to the opposite direction. (If the skip function is operating in the forward direction mode, each press of the |◀◀ button reduces the number of selections to be skipped by one. If the skip function is operating in the reverse direction mode, press the ▶▶| button to reduce the number of selections to be skipped.)

To increase the number of selections to be skipped, press the appropriate Skip button (|◀◀ or ▶▶|) once for each selection to be added.

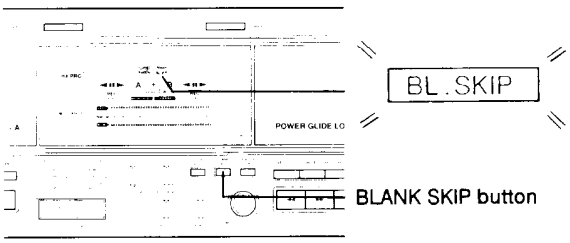
In the above explanation, the functions of the ▶▶| and |◀◀ buttons are reversed if the forward direction is ◄.

- The Skip function operates by detecting the sections on the tape between selections where nothing is recorded. Therefore, it may not operate properly under circumstances such as the following:

1) If the blank sections between selections are too short.
2) If the music is not continuous, being interrupted by narration, etc.
3) If there are places in the music that could be mistaken for breaks between selections, such as soft sections immediately followed by loud sections.
4) If there is excessive noise in the portions between selections.

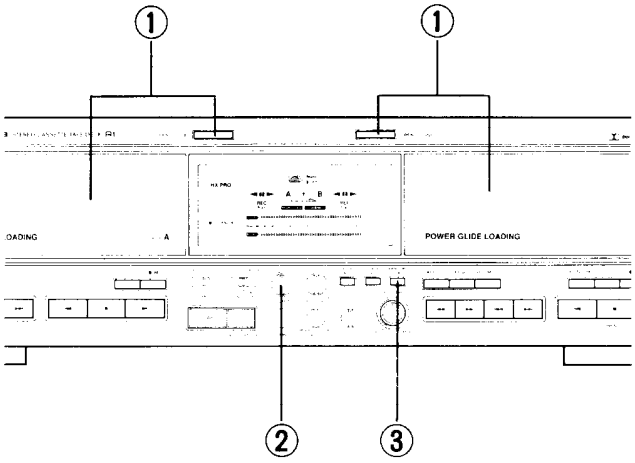
Blank Skip Function

If this function is active, when a blank section of tape lasting more than about 15 seconds is encountered, the tape is automatically fast forwarded to the beginning of the next selection. To turn on Blank Skip, press the BLANK SKIP button. The BL. SKIP indicator will light to show that Blank Skip is active.



Using the Random Play Function

This function allows you to play the selections recorded on a tape not in order, but in a random sequence determined by the TA-RW909's microprocessor. For example, the Random Play function might produce a sequence in which the first selection played is the fourth selection recorded on Deck B side A, the next selection played is the seventh selection recorded on Deck A side B, and so on.



① Load cassettes in the Deck A and Deck B cassette trays.
② Set the DOLBY NR switch as appropriate for the tapes to be played.
- Loading cassettes with the same type of Dolby encoding on both the Deck A and Deck B sides is recommended. If the two cassettes were recorded with different types of Dolby encoding, it will be necessary to reset the DOLBY NR switch whenever cassette play changes from one cassette to the other.

③ Press the RANDOM PLAY button.
- Deck A and Deck B both search for selections on their respective cassettes.

④ One of the selections on either Deck A or Deck B begins to play.
- Searching for additional selections continues on the side (Deck A or Deck B) which is not in play. When the beginning of the next selection in the sequence is located, the not-in-play side switches to the standby mode.

⑤ When the first selection finishes playing, the selection which was standing by begins.

Play continues to alternate between Deck A and Deck B as described above.

Notes:

1) The Random Play function can also be used with only one cassette loaded (in either Deck A or Deck B). In this case, as soon as one selection finishes playing the TA-RW909 immediately begins to search for the beginning of the next selection.
2) For the Random Play function to work properly, the selections on the tape must be separated by blank sections (sections with nothing recorded in them) at least five seconds long. The TA-RW909 will have difficulty locating the beginnings of selections if the blank sections are too short. Refer to the "Using the Auto Space Button" section on page 10 for details.
3) A certain amount of time is required by the TA-RW909 to locate the beginning of the next selection in the sequence. Sometimes, if a selection is of extremely short duration, the Random Play function may play the following selection on the same cassette before switching to the next selection in the sequence.
4) If desired, you can change the cassette which is not in play without canceling the Random Play function. To do this, press the OPEN/CLOSE button and replace the cassette. The TA-RW909 will immediately start searching and locate the beginning of the next selection to be played. When changing tapes, pay attention to the Dolby NR encoding used when they were recorded.

Common modes of operation — recording

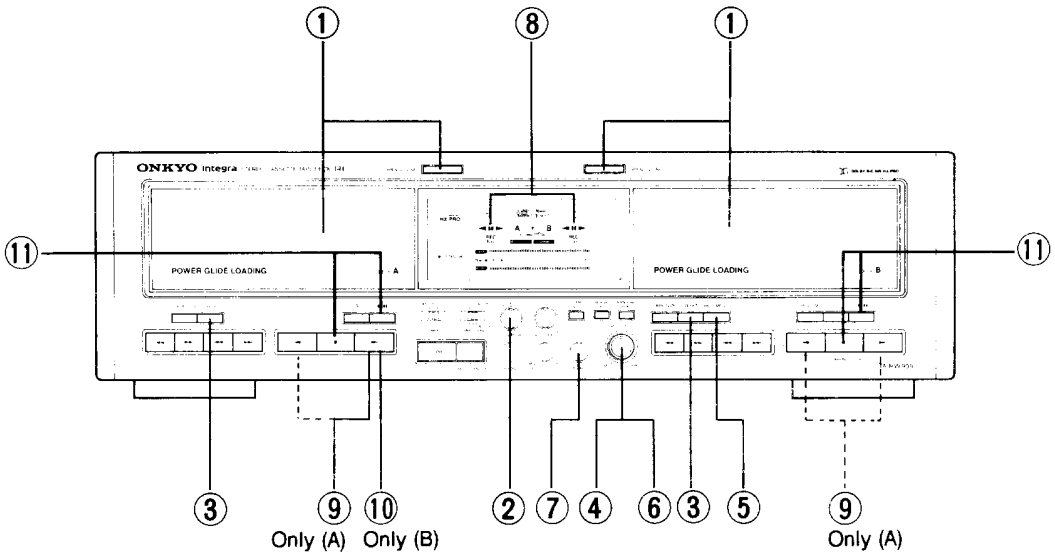
Both Deck A and Deck B are equipped for recording. Three recording arrangements (A), (B) and (C) are possible.
Use the REC MODE button to set the appropriate recording mode in order to record using method (A) or (B).

(A) Recording the Same Program on Two Cassettes Simultaneously Using Both Deck A and Deck B.

The signal received through the LINE IN jack is recorded on both cassettes.

(B) Recording on Two Cassettes Consecutively Using First Deck A then Deck B

The signal received through the LINE IN jack is recorded first on cassette Deck A, then on the cassette in Deck B when the first cassette is full. A maximum continuous recording time of three hours is possible if you use two C90 cassettes.



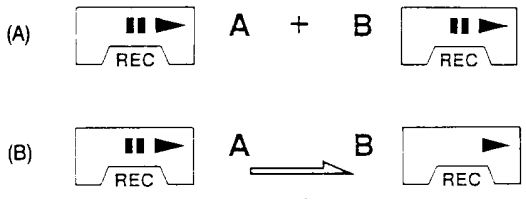
① Insert the cassettes with the sides to be recorded facing out. Before inserting the cassettes, confirm that the erasure prevention tabs are intact (see page 14). If one or both of the tabs is broken off, recording on the sides with the missing tabs will not be possible.

② Set the DOLBY NR switch to the B or C position if you want to make a Dolby NR encoded recording.

③ Press the elapsed time RESET buttons to return the tape counters to [0:00] so you can index the recording for future reference. (The REMA mode cannot be reset.)

④ Set the INPUT LEVEL control knob to the center position.

⑤ Press the REC MODE button to bring up indication (A) or (B), as shown below, on the fluorescent display. (Indication (A) appears the first time the REC MODE button is pressed, indication (B) appears with the second press and the third press cancels the rec mode.)



- The tape will not move, but the Peak Level indicators will show the level of the signal being received through the LINE IN jack .

⑥ While watching the Peak Level indicators, adjust the INPUT LEVEL control knob to the proper position. (The input levels for the left and right channels are adjusted simultaneously.)

⑦ Use the BALANCE control knob to adjust the balance between the left and right channels. Refer to the "Setting the Proper Recording Level" section for instructions.

⑧ Confirm that the direction of tape travel is correct.
(A) To change the direction of tape travel, hold down the ●/❚❚ button and press the ◄ or ► button, as appropriate.
(B) Check the direction of tape travel for Deck B only. To change the direction, hold down the ●/❚❚ button and press the ◄ or ► button, as appropriate.

⑨ Confirm again that an input signal is being received (the Peak Level indicators should light) and then press the Deck A or Deck B ► or ◄ play button to begin recording.
- Pressing the play button for either Deck A or Deck B will start recording on both.

⑩ Confirm again that an input signal is being received (the Peak Level indicators should light) and then press the Deck A ► play button to begin recording.
- Recording begins on Deck A. When Deck A finishes recording, recording begins on Deck B.

⑪ The auto-stop mechanism will stop tape transport automatically when the end of the tape is reached. To stop recording before the end of the tape, press the ■ button of the deck which is currently recording. To briefly interrupt recording, press the ●/❚❚ button. When recording method (A) is used, the ■ button affects only Deck A or Deck B, but the ●/❚❚ button affects both at the same time.

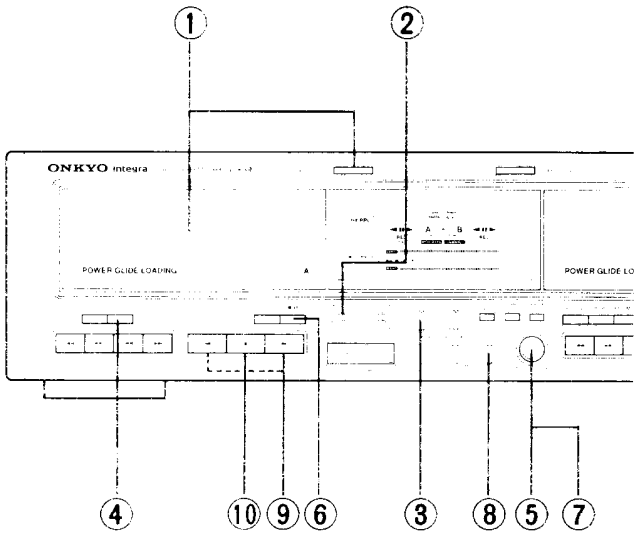
Notes:

Recording Method (A)
1) The DOLBY NR switch also affects both Deck A and Deck B.
2) The INPUT LEVEL control knob and the Peak Level indicators are shared by both Deck A and Deck B.

Recording Method (B)
1) Sequential recording in the opposite direction to the one described above (beginning with Deck B and then switching to Deck A) is not possible.
2) If the Deck B ◄ indicator is lit when you begin, the tape will be recorded in the reverse direction.
3) If a cassette side with its erasure prevention tab broken off is encountered in the during the recording sequence, recording will cease at that point. For example, if the erasure prevention tab for, say, side B of the cassette in Deck A has been broken off, that side will not be recorded and neither will either side of the cassette in Deck B.

(C) Recording a Single Cassette Using Either Deck A or Deck B.

The following instructions assume that Deck A is being used.



① Insert a cassette with the side to be recorded facing out. Before inserting the cassette, confirm that the erasure prevention tabs are intact (see page 14). If one or both of the tabs is broken off, recording on the sides with the missing tabs will not be possible.

② Set the DIRECTION switch to the desired ((⇉) or (⇇)) tape transport mode. See the "Direction switch" section on page 13 for details.

③ Set the DOLBY NR switch to the B or C position if you want to make a Dolby NR encoded recording.

④ Press the elapsed time RESET button to return the tape counter to [0:00] so you can index the recording for future reference. (The REMA mode cannot be reset.)

⑤ Set the INPUT LEVEL control knob to the center position.

⑥ Press the ●/❚❚ button. The tape will not move, but the Peak Level indicators will show the level of the signal being received through the LINE IN jack .

⑦ While watching the Peak Level indicators, adjust the INPUT LEVEL control knob to the proper position. (The input levels for the left and right channels are adjusted simultaneously.)

⑧ Use the BALANCE control knob to adjust the balance between the left and right channels. Refer to the "Setting the Proper Recording Level" section for instructions.

⑨ Confirm again that an input signal is being received (the Peak Level indicators should light) and then press the ► or ◄ play button to begin recording.

⑩ The auto-stop mechanism will stop tape transport automatically when the end of the tape is reached. To stop recording before the end of the tape, press the ■ button. To interrupt recording briefly, press the ●/❚❚ button.

Notes:

1) This deck will not commence recording if you press the ●/❚❚ and ► or ◄ buttons at the same time. To begin recording, first press the ●/❚❚ button to put the deck into the rec/pause mode, then press either the ► or ◄ play button as appropriate.
2) Do not unplug the AC cord while recording (or dubbing). If the cord is unplugged, the cassettes cannot be removed from the holders.

Synchro Recording System

The TA-RW909 is equipped with a Synchro Recording function to facilitate making recordings from CD. When the tape deck is properly connected to an appropriately equipped Onkyo CD player, the Synchro Recording function ensures that recording commences simultaneously with the start of CD play. In order to use this feature, the TA-RW909 must be connected, either directly or via an amplifier, to the CD player by an audio connecting cable and an RI remote control cable.

Setting the Proper Recording Level

The recording level has an important effect on the sound quality a tape will have when it is played back. A recording level that is too high will cause distortion while one which is too low will lower the signal-to-noise ratio resulting in a tape with excessive "hiss noise." It is particularly important to set the recording level correctly with cassette tapes since they have a much thinner magnetic coating than open reel tapes. The thin coating gives the tape a comparatively low saturation level which can easily be surpassed if the recording level is set too high. To obtain the best results with this deck, adjust the INPUT LEVEL knob while watching the Peak Level indicators to be sure the setting is neither too high nor too low. The top 5 segments of the Peak Level indicators (0dB – +6dB) feature a peak hold function.

- With metal tape formulations, the INPUT LEVEL knob should be adjusted so that the +4dB indicators light up from time to time. With all other kinds of tapes, the +2dB indicator should only light up from time to time. If the left and right channel levels are noticeably different, use the BALANCE knob to correct the disparity.

The Dolby Noise Reduction Systems

Dolby B NR is the system that most cassette tape decks use to reduce the background tape noise that is inherent in all cassette tapes. Dolby Laboratories then developed an even more effective noise reduction system, Dolby C NR, in response to the demand for increasingly better sound quality from cassette tapes.
Both Dolby noise reduction systems operate by boosting signals during recording that fall below a certain input level. Dolby B and C NR operate on the higher portions of the frequency spectrum using what is called a "sliding band" technique. That's because tape hiss is most prominent during quiet, high frequency portions of a recording. These same signals are then reduced back to their original strength during playback, thereby reducing the background noise by the same amount. In order to operate only when necessary, the Dolby NR system has a varying effect depending on the input level and frequency of the material being recorded.
Dolby C NR is capable of reducing tape hiss by an additional 10dB as compared with Dolby B NR. In addition to its noise reduction function, Dolby C NR has an antisaturation network that lowers high input levels before recording them and returns the signals to their original strength during playback. This raises the high frequency saturation level of cassette tapes to allow you to record signals that would normally cause distortion. The maximum output level of cassette tapes is increased by more than 4dB at 10kHz by this system.

The Dolby HX PRO System

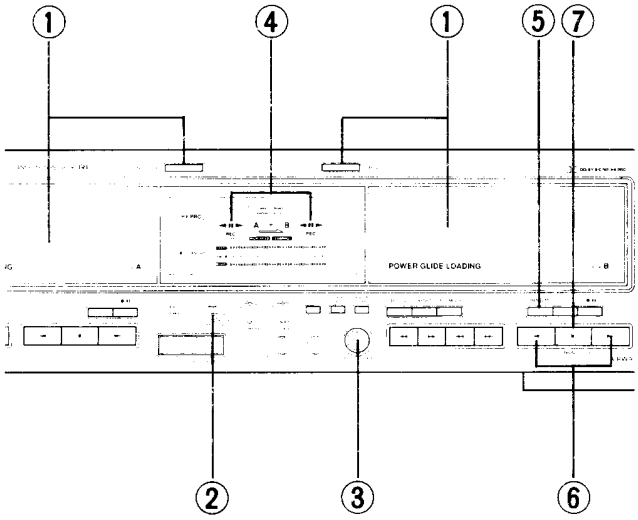
Tape sensitivity is constantly changing as recordings are made due to the biasing effect of high frequency audio signals. Dolby HX PRO is a system that compensates for these undesirable fluctuations during recording. It does not operate during playback, so cassettes recorded with Dolby HX PRO can be played back on decks not equipped with the system.

Note:

Dolby HX PRO operates independently of Dolby B and C NR and only during recording.

Tape Dubbing

This deck has two cassette doors so that dubbing (copying) operations can be performed without using a second cassette deck. To save time, it is also equipped with a high-speed dubbing function that records tapes in about half the time normally required. Tape dubbing can only be performed from Deck A to Deck B. Dubbing in the opposite direction is not possible.



① Insert the prerecorded cassette in the Deck A cassette door and the cassette to be recorded on the Deck B cassette door.

② Set the DIRECTION switch to the desired tape transfer mode.
(⇉) one side: Only one side of the tape is copied after which tape transport stops automatically.
(⇄) both sides, (A ⊂⊃ B) repeat: Both sides of the tape are copied after which tape transport stops automatically.
To perform auto-reverse dubbing using either the (⇄) or (A ⊂⊃ B) mode, copying must begin in the forward direction. If it is initiated in the reverse direction instead, tape transport will stop automatically after only one side.

③ Set the INPUT LEVEL control knob to zero. The recording level is automatically set to the optimum point when the dubbing mode is used.

④ Check the Deck A and Deck B ◄ ► direction indicators to be sure that tape transport will start in the desired direction. To change the setting of one of the ◄ ► direction indicators to ►, press the appropriate ► play button followed by the ■ button.

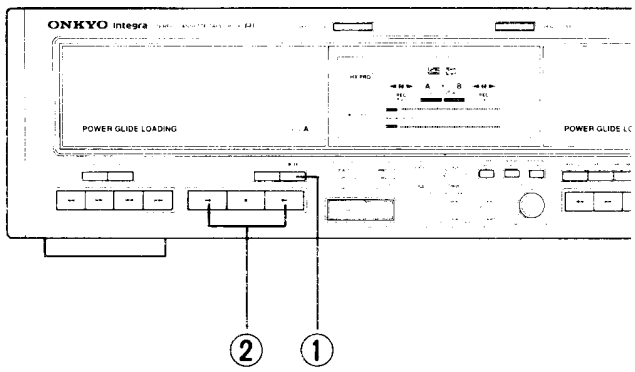
⑤ Press the DUBBING MODE button to select either high speed or normal speed dubbing.
The Deck B ⁚ indication lights up along with ⟿ for high speed dubbing or ⟿ for normal speed dubbing.

⑥ Press the Deck B ◄ or ► play button, as appropriate, to begin dubbing.
- Pressing the Deck B ●/❚❚ button during dubbing returns this deck to the rec/pause mode. It is then possible to use the direct music search function on Deck A. (See "Using the Skip Function" on page 7 for details).

⑦ To discontinue dubbing before the end of either tape has been reached, press the Deck B ■ DUBBING STOP button.
- The position of the DOLBY NR switch has no effect on the signal being recorded. In any case, the recording will be an exact copy of the cassette in Deck A. Therefore, the recording will include the same NR encoding as the original (or none at all). If you wish to monitor the signal from a Dolby NR encoded tape during dubbing, be sure to set the DOLBY NR switch to match the type of Dolby NR with which the cassette was recorded. Then you can monitor the decoded signal while the encoded signal is copied to the cassette in Deck B. It is also possible to monitor the speeded up signal during high speed dubbing.
- Turn down the amplifier or receiver volume control during high speed dubbing.

Using the Auto Space Button

This button is useful not only for making recordings from radio broadcasts but also to eliminate the noise of the stylus making contact with a record and the noise between selections on a record. Auto Space also comes in handy for making blank spaces when re-recording and editing cassette tapes. When recording over an old recording, switch to the rec/pause standby mode first and then press the O button to insert a blank section about five seconds long before starting the new recording. This assures that none of the previous recording will remain in the section of tape immediately preceding the start of the new recording.



① Press the O button at any point during a recording where you want to enter a blank section about five seconds long.
- The O button works in both the record and record/pause modes.
- The PLAY indicator flashes on and off and tape transport continues for about five seconds during which no signal is recorded.
- After the blank section has been inserted, tape transport stops automatically and the deck returns to the rec/pause standby mode.

② To continue recording, press the play button corresponding to whichever ◄ ► Direction indicator is lit.

Notes:

1) Pressing the deck B O button during dubbing causes Deck A playback to pause while a blank section is inserted onto Deck B. Then the deck reverts to the Dubbing Pause mode. To continue dubbing, press the appropriate ◄ ► button on Deck B.
2) Pressing the Deck A or Deck B O button while simultaneously recording the same signal on Deck A and Deck B causes a blank section to be inserted onto both cassettes.

■ To Insert a Blank Section of Tape Less Than Five Seconds Long

Press the ●/❚❚ button to return to the rec/pause standby mode or press the appropriate ◄ ► play button before the five second period has elapsed .

■ To Insert a Blank Section of Tape More Than Five Seconds Long

Hold the O button down for as long as you want the blank section to be. The deck will return to the rec/pause standby mode immediately when the button is released.

Special modes of operation

Real Time Counter

REMA/ELAPSED button affects both Deck A and Deck B.
The Real Time Counter can be used in two ways:

1. Elapsed Time Indication (ELAPSED)

(1) When a cassette is loaded into the cassette door, the previous tape size setting flashes on and off on the display. Press the TAPE SIZE button to enter the size (duration) of the new cassette.
- Each press advances the Tape Size indicator in order from C90 to C100, C120, C46, C60 and then back to C90.
  Set the size of the cassette to be used before starting playback or recording.

(2) Press the REMA/ELAPSED button to switch the Real Time Counter to the "ELAPSED" (elapsed) time mode.

(3) To return the counter to [0:00], press the RESET button.

(4) When tape transport begins in the record or play mode, the counter will begin counting the elapsed time. (If you turn the cassette over without resetting the counter, the total time including the first side will be displayed.) The two digits on the left side display minutes and the two digits on the right display seconds.
  The counter reads [0:00] "ELAPSED" and the Tape Size indicator reads "C90" when the power is first turned on.

2. Remaining Time Indication (REMAIN)

The Real Time Counter can also be used to show the amount of time remaining on a cassette as it is being recorded or played back.

(1) Set the proper tape length using the TAPE SIZE selector button.

(2) Press the REMA/ELAPSED button to switch the Real Time Counter to the "REMAIN" (remaining) time mode.
- The indication [– – : – –] is displayed.

(3) Begin playback or recording. The Real Time counter will display the tape size flashing for a few seconds, then the time remaining on the cassette (based on the tape size setting) will be displayed.
- To check the tape size setting after playback or recording has started, press the TAPE SIZE button once. The current setting appears on the display.
  If you accidentally set the wrong tape length, press the TAPE SIZE button again to set the correct length (without stopping playback or recording) to obtain the correct remaining time reading.

3. To Obtain the Most Accurate Time Indications Possible

The Real Time Counter is not a clock, so there may be slight differences between the tape transport time as shown by the counter and the actual time that has elapsed. Small differences in tape lengths between different manufacturers can also cause slight errors. To obtain a more precise reading of remaining time near the end of a cassette, repeat the remaining time calculation procedure. If you insert a cassette of a different length, use the TAPE SIZE button to set the new length.
- The remaining time is automatically recalculated when the remaining time counter reaches [6:00]. The display changes briefly to the tape's length [Ex: C90], then the new (more accurate) remaining time is displayed.

Notes:

1) If the wrong tape size has been selected, the remaining time reading will differ significantly from the actual time remaining on the cassette.
2) The correct elapsed time is maintained even when the deck is in the remaining time mode.
3) The RESET button is used to reset the elapsed time reading.
4) When using a tape size other than those included in the Tape Size indicator settings, set the Tape Size indicator to the size closest to that of the cassette being used. In such cases there will be a certain discrepancy between the actual elapsed and remaining times and the values displayed. Slight differences in the time displayed can also be caused by variations in the internal construction of different cassettes.

Automatic Tape Selection System

This deck automatically detects the type of cassette in the cassette door and sets the bias and equalization to the correct settings. Tape selection is performed by detecting the presence or absence of identification pits on the back of the cassette shell. Cassettes manufactured before this identification system was adopted and bargain cassettes that do not incorporate these pits can not be used with this deck.

Auto-Reverse Operation

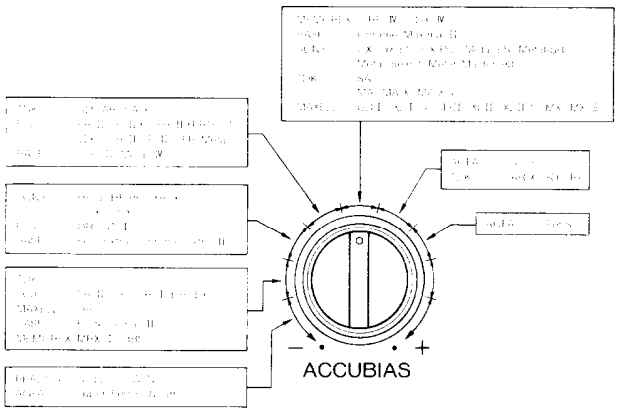
This deck's auto-reverse function automatically reverses the direction of tape travel in the playback or recording modes when the end of the magnetic tape is reached. Tape travel is reversed as soon as a photo sensor detects the presence of the clear leader at the end of the tape. In other words, as soon as the sensor's light ray passes through the tape, the direction of tape travel reverses. Reversal takes place extremely quickly so the gap between sides during playback is barely noticeable. If the cassette tape does not have a clear leader section, tape travel is reversed the instant the end of the tape (including the leader) is reached.
Auto-reverse may be activated prematurely with defective cassette tapes with pin holes or other damage which allows light to pass through the tape. To prevent this from happening, play and record such tapes using the one side tape transport mode in which auto-reverse is not activated.

Notes:

1) Because of slight physical differences between cassette shell halves, cassettes recorded in the forward direction should be played back in the forward direction to obtain the best results.
2) When recording, the direction of tape travel only switches from forward to reverse. To keep track of which side is being recorded so that you do not mistakenly use an already recorded side, it is a good idea to always begin recordings with side A.
3) When recording over a tape that has previously been recorded, there may be cases in which a few seconds of the old material remains at the ends of the tape due to the relative positions of the auto-reverse sensor and the recording head. To remove the left-over sections from the beginning and end of such as tape, use the method described in the "Using the Auto Space Button" section on page 10.

Using the Accubias Control Knob

Although this deck is equipped with an Accubias system for fine bias adjustment, you will get excellent results with most tapes by just leaving the ACCUBIAS knob in the center clickstop position. Nevertheless, some tapes may require additional bias adjustment in order to obtain flat frequency response. In such cases, refer to the following diagram. For tapes not listed, refer to the "Determining the Correct Accubias Setting for Tapes Not Listed" section at right.



The position of the ACCUBIAS knob affects only normal and high position tapes; it has no effect on metal tapes.

Determining the Correct Accubias Setting for Tapes Not Listed

Use the following procedure to determine the correct Accubias setting for cassettes not listed in the above diagram. As it is necessary to make use of the "white noise" produced by FM tuners when tuned to the unused frequencies between stations, it is not possible to perform this procedure with FM tuners that do not produce white noise. In such cases, use the center clickstop position when making recordings.

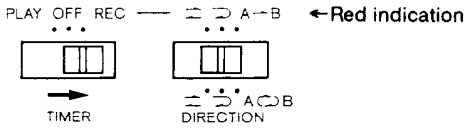
(1) Set your FM tuner to an unused frequency between stations.
(2) Turn the tuner's FM muting switch off. (White noise should be audible.)
(3) Record white noise on a section of the cassette tape you wish to use at about the –10dB recording level. (The ACCUBIAS knob should be set to the center position.)
(4) Compare the sound of the tuner's white noise with that recorded on the tape. If they sound the same, the Accubias setting is correct.
(5) If they do not sound the same on the first try, turn the ACCUBIAS knob toward the (+) or the (–) indication and repeat the above procedure. When you have found the position that most closely approximates the sound of the FM tuner's white noise, record the setting in the above diagram for future reference.

Timer Recording and Playback

This deck can be set for preset timer recording and playback when connected to an audio timer (optional). Connect the tape deck and the other system components to the timer and test the arrangement once to ensure that timer recording and playback work properly. Refer to the timer instruction manual for instructions on setting up the system.

1. Timer Recording

(1) Tune in the desired radio station and adjust the tape input level to the proper setting.
(2) Set the timer to switch the power on at the desired time and the TIMER switch to the REC position.
(3) Select the direction mode of your choice using the DIRECTION switch. A red indication appears showing the current direction mode.
(⇉) one side: Only one side of the tape is recorded, after which tape transport stops automatically.
(⇄) both sides: Both sides of the tape are recorded after which tape transport stops automatically.
(A → B) relay recording: After both sides of tape A are recorded, both sides of tape B are recorded.



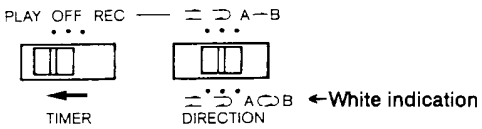
Notes:

1) Confirm the direction of tape transport for the tape to be recorded before you begin. The direction is shown by the lit indicator (◄ or ►).
2) Note that the audio system must be left on.
3) If no output from the speakers is required during the actual recording, set the amplifier speaker to OFF or turn the volume down all the way.

2. Timer Playback

For use as a morning alarm, set up this deck and the audio system for audio playback.

(1) Set the timer to switch the power on at the desired time.
(2) Set the TIMER switch to the PLAY position.
Remember to leave the relevant power switches in their ON positions.
(3) Select the direction mode of your choice using the DIRECTION switch. A white indication appears showing the current direction mode.
(⇉) one side: One side of Deck A or Deck B is played, after which tape transport stops.
(⇄) both sides: Both sides of Deck A or Deck B are played, after which tape transport stops.
(A ⇄ B) repeat: Both sides of Deck A and both sides of Deck B are played four times in succession.

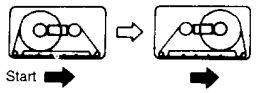
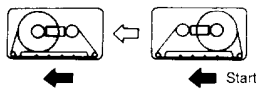
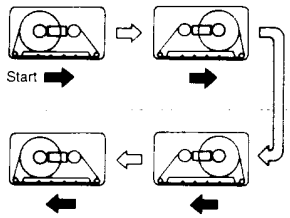
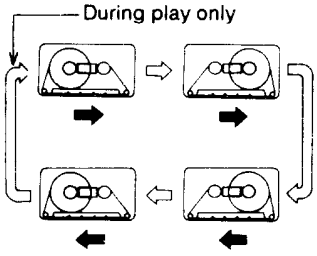


Note:

Confirm the direction of tape transport for the tape(s) to be played before you begin.

Direction switch

- Recheck the tape travel direction settings (shown by the ◄ or ► indicators) before beginning playback or recording.
- The following explanation assumes that cassette side A is facing outward.
- Due to the location of the photo sensor, the transparent leader must go by the heads before being detected for reverse-to-forward switching. As a result, the silent gap is about one second longer than the forward-to-reverse switching gap.
- The results listed under "Recording" below are obtained not by using the REC MODE switch, but by pressing the ●/❚❚ button followed by the ◄ or ► button.

Direction mode	Direction of Tape Travel	Playback/Timer Play	Recording
One side	Forward only 	When play is started in the ► direction, only side A (front) is played (once).	When recording is started in the ► direction, only side A (front) is recorded.
	Reverse Only 	When play is started in the ◄ direction, only side B (flip side) is played (once).	When recording is started in the ◄ direction, only side B (flip side) is recorded.
Both sides		When play is started in the ► direction, side A and then side B are played, after which tape travel automaticallay stops.	When recording is started in the ► direction, side A and then side B are recorded after which tape travel automatically stops.
		When play is started in the ► direction, side B is played after which tape travel automatically stops. ● If cassettes are loaded in both Deck A and Deck B, both sides of the cassette in Deck A are played followed by both sides of the cassette in Deck B.	If recording is started in the ◄ direction, only side B is recorded after which tape travel stops automatically.
Repeat A ⟲ B Relay (timer recording) A → B		When play is started in the ► direction, sides A and B are played eight times or until the appropriate ■ button is pressed. ● If cassettes are loaded in both Deck A and Deck B, both sides of the cassette in Deck A are played followed by both sides of the cassette in Deck B. Then the process begins again from side A of the cassette in Deck A and continues until four complete cycles have been completed.	When the repeat mode is used to record both sides of a cassette in either Deck A or Deck B, the effect is the same as if both sides (⟲) had been selected. ● If cassettes are loaded in both Deck A and Deck B, both sides of the cassette in Deck A will be recorded followed by both sides of the cassette in Deck B. Then tape transport stops. (The Deck B direction should be set to ►.)

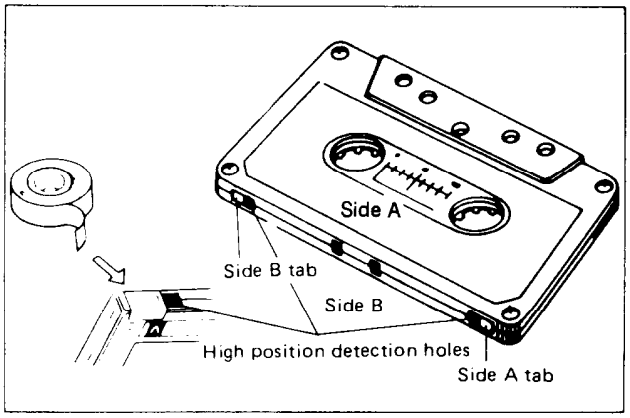
Notes:

1. In order to prevent detection of the leader tape immediately after playback or recording begins, the photo sensor does not operate for the first 20 seconds of playback or recording operation. However, if the end of the tape is reached during the initial 20-second period, the direction of tape travel will still be reversed provided the DIRECTION switch is set to "both sides" or "repeat."
2. Auto-reverse may not function properly in the following cases:
   - If the tape is extremely thin (C-120 cassettes, for example).
   - If there are markings (letters, designs, etc.) on the leader.
   - If a strong light is directed at or near the recording/playback head.
   - If the cassette has no leader.
   - If the cassette has a leader which is not completely transparent.
3. Note that even if the leader is not detected, the direction of tape travel will still be reversed (provided the deck is set to one of the reverse modes) when the end of the tape (including the leader) is reached. If the deck is set to the "one side" mode, tape travel will stop when the end of the tape is reached.

Handling cassette tapes

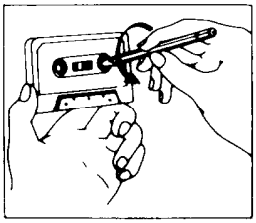
Erasure Prevention

Cassette tapes are constructed with erasure prevention niches on the back edge that are initially covered by break-off tabs. If you wish to protect a recording from accidental erasure, break off the tab(s) of the appropriate side(s). It will no longer be possible to use the Recording button with such a cassette. If at some later date you wish to re-record the cassette, simply cover the openings with small pieces of cellophane tape.



Tape Slack

Slack in the tape (tape not stretched tightly) can cause tangling around the pinch roller and capstan and jam the mechanism. Remove any tape slack with a pencil or similar device as shown in the diagram.



Owner maintenance

This deck requires no lubrication.

Head, Pinch Roller and Capstan Cleaning

Playback sound quality can be greatly diminished if magnetic particles are allowed to accumulate on the recording/playback heads. Be sure to clean the heads periodically, normally 2 to 3 times a month, to maintain your deck's original performance.
Dirty heads will cause:

- Poor sound quality (loss of high frequency response)
- Decreased volume
- Skipping
- Incomplete erasure of previous recordings

If the pinch rollers and capstan are dirty, the tape may become tangled and damaged by wrapping around the pinch roller and capstan.
To prevent these problems, clean the heads, pinch rollers and capstans with a cotton swab dipped in cleaning fluid.

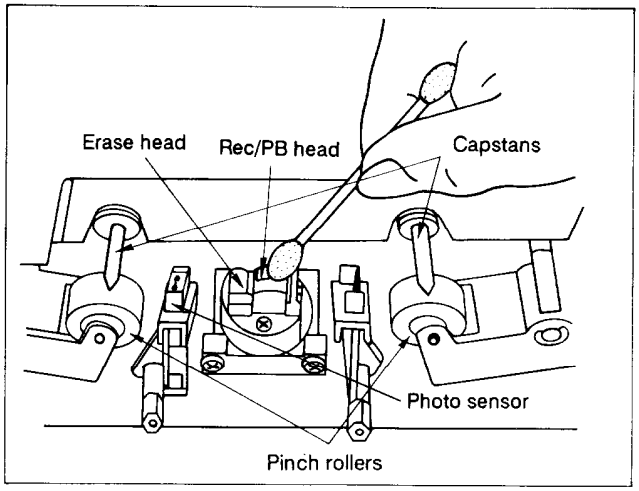


Photo Sensor Cleaning

The auto-reverse function may not operate properly if the photo sensors are dirty. To insure proper auto-reverse operation, periodically clean the photo sensors with a cotton swab.

Demagnetizing

Residual magnetism builds up in the heads after the cassette deck has been used for an extended period of time. This buildup introduces noise and static into tapes and impairs high frequency response. To prevent this, demagnetize the heads and the other metal parts in the area (like the capstan shafts) once every 50 hours of use. Keep the deck power off while using the demagnetizer. Also place tapes far away from the work area.

Specifications

Track System:	4-tracks, 2-channels
Erasing System:	AC erase
Tape Speed:	4.8 cm/sec. (1-7/8 i.p.s.) 9.6 cm/sec. (3-3/4 i.p.s.) (high speed dubbing)
Wow and Flutter:	0.065% (WRMS)
Frequency Response:	20 – 15,000Hz (Normal) (30 – 14,000Hz ±3dB) 20 – 16,000Hz (High) (30 – 15,000Hz ±dB) 20 – 17,000Hz (Metal) (30 – 16,000Hz ±3dB)
S/N Ratio:	Dolby NR off: 58dB (metal position tape) A noise reduction of 10dB above 5kHz and 5dB at 1kHz is possible with Dolby B NR. A noise reduction of 20dB at 5kHz is possible with Dolby C NR.
Input Jacks:	Line IN: 2 Input sensitivity: 60mV Input impedance: 50 kohms
Outputs:	Headphone jack: 1 Optimum load impedance: 8 to 200 ohms Line OUT: 2 Standard output level: 500mV (0dB) Optimum load impedance: over 50 kohms
Motors:	DC servo motor x 2; DC motor x 4
Heads:	REC/PB: special hard permalloy x 2; Erase head: ferrite x 2
Power Supply:	• U.K and Australian models: AC 240V, 50 Hz • U.S.A and Canadian models: AC 120 V, 60 Hz • Worldwide models: AC120 and 220 V switchable, 50/60 Hz
Power Consumption:	35 watts
Dimensions:	455(W) x 131(H) x 362(D)mm (17-15/16" x 5-3/16" x 14-1/4")
Weight:	8.2 kg. (18.1 lbs.)

Specifications and external appearance are subject to change without notice because of product improvements.

Troubleshooting guide

The following guide lists problems which do not require professional servicing. If, however, the problem can not be remedied using this guide, contact your Onkyo dealer for assistance.

Problem	Cause	Remedy
No power	• Power cord plug is loose.	• Insert plug properly into outlet.
Playback but no sound.	• Hook-up incorrect. • Stereo amplifier input selector switch is set to wrong position.	• Check and hook up correctly according to pege 3 • Change switch position.
Tape does not move.	• Slack tape wound around pinch roller.	• Take up slack with a pencil (see page 14).
Recording button does not engage.	• No tape in cassette door. • Erasure prevention tab(s) removed.	• Load cassette tape. • Change cassette or cover tab hole with cellophane tape.
Hoarse sound, balance unstable.	• Playback head dirty. • Tape is stretched.	• Clean head (see page 14). • Replace cassette.
Excessive noise and tape hiss.	• Head has become magnetized. • Tape with high noise level.	• Demagnetize (see page 14). • Replace cassette.
Distorted sound.	• Distortion in tape.	• Tape is probably bad but confirm by listening to another.
Recordings are distorted.	• Recording was done at too high a level.	• Readjust INPUT LEVEL control knob according to the directions on page 9.
Tape squeal/skipping.	• Dirty head, pinch roller or capstan shaft. • Cassette shell is binding tape or tape is stretched.	• Clean (see page 14). • Change cassette or try correcting with fast forward and rewind.
Excessive hum during playback.	• Connecting cables not inserted firmly. • External flux leakage from nearby amplifier.	• Insert plugs firmly. • Move deck away from hum source.
High frequencies too strong.	• Dolby NR encoded tape played back with NR off.	• Set the DOLBY NR switch to the proper position for the tape being played back.
No high frequency sounds.	• Non-Dolby NR encoded tape played back with Dolby B or C NR on. • Record/playback head has become dirty.	• Set the DOLBY NR switch to the proper position for the tape being played back. • Clean (see page 14).
Skip function does not operate properly.	• The blank sections between selections are too short or contain too much noise. • The TA-RW909 is located too close to a TV set.	• Use a cassette with completely blank sections of sufficient length between selections. • Turn off the TV or move the TA-RW909 farther away from it.
Quick reverse does not operate.	• The DIRECTION switch is set incorrectly. • The cassette has no leader or the leader is not transparent. • The photo sensor is dirty.	• Set to ⇄ or A ⇄ B. • Use a cassette with a suitable leader. • Clean (see page 14).
Direction of tape travel reverses before end of tape is reached.	• Tape is creased, wrinkled or scratched.	• Change cassette. • Set DIRECTION switch to →.
Deck does not operate properly.	• Tape transport control microcomputer has been exposed to interference (from power supply or static electricity).	• Unplug the AC cord for about ten seconds.

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